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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/649,293	08/28/2000	Lawrence T. Cohen	2447-012	7384

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EXAMINER

EVANISKO, GEORGE ROBERT

ART UNIT PAPER NUMBER

3762

30

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/649,293

Applicant(s)

COHEN, LAWRENCE T.

Examiner

George R Evanisko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 5, 6 and 12-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 6, 12-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/16/03 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 13, 14, and 18, "electrode intensity" is vague. It is suggested to use "electrode density".

In claim 17, line 2, "toward" should be deleted. In addition, "closer" and "further" are vague since they are relative terms and it is unclear which direction "further" is. In addition, shouldn't the electrodes be spaced closer at the apical end (further) than at the basal end (closer)?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5, 6, 12, 14, and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuzma et al (6304787). The claims are "comprising" claims, or open ended claims, and do not preclude other electrode from being used. Although Kuzma has multiple electrodes that are evenly spaced, the Examiner is considering Kuzma's electrodes numbered 1, 2, 4, and 8, as the claimed "plurality of electrodes" and therefore will meet the claimed limitations of having an electrode density higher in one array region and/or higher at locations that match aural receptors/positions or defining a non-uniform electrode density higher at locations of aural receptors/positions.

Claims 1, 5, 6, and 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hochmair-Desoyer et al ("An eight Channel Scala Tympani Electrode for Auditory Prostheses").

The claims are "comprising" claims, or open ended claims, and do not preclude other electrode from being used. On page 46, the fourth full paragraph, Hochmair-Desoyer describes the spacing between contacts belonging to the same channel (consecutive electrodes) as 1.5 mm and between two neighboring contacts of different channels (other consecutive electrodes) as 0.5 mm. Starting from the distal tip, the second electrode of the first channel (the first channel electrode farthest from the distal tip) and the first electrode of the second channel will have a spacing of 0.5 mm. The first electrode of the second channel and the second electrode of the second channel will have a spacing of 1.5 mm. Therefore, Hochmair-Desoyer provides a

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higher/non-uniform electrode density of 0.5 mm compared to the electrode density of 1.5 mm.

Finally, for the claims, Hochmair-Desoyer states on page 45, that the contacts are placed as near to excitable nerve-structures as possible.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 6, and 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hochmair et al (4284865).

Hochmair is capable of meeting the functional use recitations presented in the claims. In addition, Hochmair discloses the claimed invention except for the electrode spacing to have a higher and/or non-uniform density to match aural receptors/positions. Hochmair does disclose the schematic of the cochlea showing the frequency response, the use of at least four different frequency ranges, the stimulating of the lower frequency stimulation sites near the apex, and does disclose that the electrode contacts can be positioned on the device to stimulate regions of the cochlea for a desired frequency response and in accordance with the frequency response of the cochlea. This provides a clear suggestion that the spacing of the electrodes can be modified to change the distance between adjacent electrodes to have a higher and/or non-uniform density at locations to match aural receptors/positions to correspond to a desired frequency response and in accordance with the frequency response of the cochlea. The determination of the most appropriate spacing of the electrodes by routine experimentation, such as having the spacing

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between adjacent electrodes at the apical end be less than the spacing at the basal end, the spacing to be different in different regions, and the spacing to be non-uniform or being a higher density between consecutive electrodes, would, therefore, be prima facie obvious to one having ordinary skill in the medical art.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection necessitated by amendment. The claims are open ended claims and do not preclude the prior art references from having other electrodes inserted between or outside the claimed "plurality of electrodes". It is suggested to use something similar to claim 13 (and the previous amendments) stating that consecutive electrodes are positioned to define a non-uniform electrode density. Although, this limitation will have to be further examined and searched.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R Evanisko whose telephone number is 703 308-2612. The examiner can normally be reached on M-F 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 703 308-5181. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

George R Evanisko
Primary Examiner
Art Unit 3762

3/10/4

GRE
March 10, 2004